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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/759,766

01/16/2004

Thomas M. Walsh

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8354

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7590

09/13/2006

THE DIRECTV GROUP INC  
PATENT DOCKET ADMINISTRATION RE/R11/A109  
P O BOX 956  
EL SEGUNDO, CA 90245-0956

EXAMINER

TRINH, TAN H

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/759,766		WALSH ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	TAN TRINH		2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-15 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1-16-2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1-16-06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement (IDS) submitted on 01-16-2004, the information disclosure statement is being considered by the examiner.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-15 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,810,249. Although the conflicting claims are not identical, they are not patentably distinct from each other because, the limitations of the claims of the instant application are broad enough to be encompassed by the limitations of the claims of the U.S. Patent No. 6,810,249 and as such it would have been

Art Unit: 2618

obvious to one of ordinary skill in the art to implement the claims of the instant application using the claims of the U.S. Patent No. 6,810,249 in order to implement a method and system using.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 5-7, 9-10 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Olds (U.S. Patent No. 5,732,351).

Regarding to claim 1, Olds teaches a system of geostationary satellite orbits coordinatable with a geostationary belt of satellite positions having a plurality of geostationary slots (see fig. 1), the system comprising: a plurality of satellites forming coordinatable system of geostationary satellite orbits that provide satellite coverage continuously within a specified service area (see fig. 1, and col. 3, line 53-col. 4, line15); each satellite position being located in one of the plurality of geostationary slots and generating a plurality of beams in a respective group of cells (see fig. 2, col. 5, lines 28-53); and a tiling pattern for use on the surface of the earth (see fig. 2 col. 4, lines 1-15), the tiling pattern having a plurality of cells corresponding to the plurality of beams (see fig. 2, col. 4, lines 1-15 and col. 5, lines 28-53), each of the cells having a defined frequency for communication and a frequency reuse spacing (see figs. 1-2 and 8, col. 1 lines 37-42), wherein at least one beam formed from a first of the plurality of satellites is directed to a group of cells formed from a second of the plurality of satellites (see fig. 2, and col.

5 lines 28-45, Col. 7, lines 64-col. 8, lines 1-14 and col. 12, lines 19-45.

Regarding to claim 2, Olds teaches a first satellite occupying a first geostationary slot generating a first set of uniform beams, and a second satellite occupying a second geostationary slot generating a second set of uniform beams (see fig. 2, satellites 12 and set of beams 52).

Regarding to claims 5, Olds teaches the tiling pattern is continuous (see fig. 2).

Regarding to claim 6, Olds teaches wherein a tiling pattern first set of parameters for forming a tiling pattern includes a reuse pattern (see figs. 2 and 9, col. 2 lines 9-21).

Regarding to claim 7, Olds teaches the tiling pattern comprises a plurality of hexagons (see fig. 2 a plurality of hexagons).

Regarding to claim 9, Olds teaches wherein the first satellite and the second satellite form a fixed satellite service (see col. 9, lines 39-55).

Regarding to claim 10, Olds teaches wherein the first satellite and the second satellite form a broadcast satellite service (see col. 4, lines.47-53).

Regarding to claim 12, Olds teaches wherein the tiling pattern forms regularly distributed cell rings (see fig. 2 with distributed cell ring).

Regarding to claim 13, Olds teaches wherein forming a tiling pattern comprises forming the tiling pattern from regularly distributed cell rings (see fig. 2 with distributed cell ring and col. 4, lines 10-15).

Regarding to claim 14, Olds teaches the method of operating a satellite system (see fig. 1-2) comprising the steps of: defining a tiling pattern for use on the surface of the earth having a number of cells (see fig. 2); generating a first set of beams from a first satellite, each of the beams directed to a first group of the cells (see fig. 2, col. 4, lines 1-15); generating a second set of beams from a second satellite, each of the beams in the second set of beams directed to a second group of the cells (see fig. 2, col. 4, lines 1-15), wherein at least one of the beams from the second set of beams is directed to one in the first group of cells; and coordinating coverage from the first set of beams and the second set of beams to avoid interference between the first set of beams and the second set of beams (see fig. 2, and col. 5 lines 28-45, Col. 7, lines 64-col. 8, lines 1-14 and col. 12, lines 19-45).

Regarding claim 15, Olds teaches the satellite system (see figs. 1-2) comprising: a plurality of orbit slots having a first orbit slot and a second orbit slot (see figs. 1-2, col. 3, lines 53-col. 4, lines 15); a tiling pattern for use on the surface of the Earth (see fig. 2 col. 4, lines 1-15), the tiling pattern having a plurality of cells (see fig. 2, col. 4, lines 1-15), each of the cells having a defined frequency for communication (see col. 1, lines 28-42); a first satellite occupying a first orbit slot generating a first set of beams directed to a first group of the plurality of cells (see fig. 2, col. 4, lines 1-15); a second satellite occupying a second orbital slot generating a second set of beams directed to a second group of cells (see fig. 2, col. 4, lines 1-15), wherein at least one of the beams from the second set of beams is directed to one in the first group of cells (see fig. 2, and col. 5 lines 28-45, Col. 7, lines 64-col. 8, lines 1-14 and col. 12, lines 19-45); and the first set of beams and the second set of beams being generated according to

predetermined parameters to avoid interference between the first set and the second set of beams (see fig. 2, and col. 5 lines 28-45, Col. 7, lines 64-col. 8, lines 1-14 and col. 12, lines 19-45).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olds (U.S. Patent No. 5,732,351) in view of Leopold (U.S. Patent No. 6,226,493).

Regarding to claim 3, Olds teaches the two beams are physically so far apart that each beam contributes very little signal strength to the coverage area of the other beam, then the same channel can be assigned to both beams (see col. 12, lines 20-23). However, this obvious to the set of beams and the second set of beams have a width of 0.5 degrees, so that the set of beams have a width of 0.5 degrees or higher that is depend on the scale of the designer is setting on his scale number.

Regarding to claim 4, Olds teaches wherein the cells have an area that is proportional to Earth, But Olds does not mention wherein the cells have an area that is proportional to the latitude on the surface of the Earth.

However, Leopold teaches the cells have an area that is proportional to latitude on the surface of the earth (see figs. 1-2, and col. 6 lines 3-7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Olds and with Leopold, in order to provide the cells have an area that is proportional to latitude on the surface of the earth.

Regarding to claim 8, Olds teaches the first orbital slot and the second orbital slot. But Olds does not mention wherein the first orbital slot and the second orbital slot are coextensive.

However, Leopold teaches a satellite system the first orbital slot and the second orbital slot are coextensive (see figs.1 and 12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above teaching of Olds and with Leopold, in order to provide the orbital slot are coextensive.

#### ***Allowable Subject Matter***

8. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Reasons for allowance***

9. The following is a statement of reasons for the indication of allowable subject matter:

The closest of reference Leopold (U.S. Patent No. 6,226,493), Olds (U.S. Patent No. 5,732,351) and the prior art of record fails to teach or suggest, the first subset beams of the plurality of beams sharing a same frequency band a substantially uniform power signal and a uniform  $C/(N+I)$  requirement, where C is an intended signal power, N is the noise power due to



Art Unit: 2618

various natural thermal processes and I is a power due to all interfering signals occupying the same frequency band as the intended signal, as cited in claim 11.

***Conclusion***

**10. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(571) 273-8300, (for Technology Center 2600 only)**

*Hand-delivered responses should be brought to the Customer Service Window (now located at the **Randolph Building, 401 Dulany Street, Alexandria, VA 22314**).*


**11.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Anderson, Matthew D., can be reached at (571) 272-4177.

The fax phone number for the organization where this application or proceeding is assigned is **(571) 273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh   
Division 2618  
September 11, 2006

**PATENT EXAMINER**  
**TRINH, TAN**

